

The Traveller Challenge Video Transcript

Music Plays

Graphic Text Display

Victorian Maths Challenge.

The Traveller Challenge.

SCENE 1

Host

Hi, welcome to the Traveller Challenge. I'm Laura and I have the best job in whole world, a Games Developer.

In game development, maths is really important.

Graphic Animation

Host travels through an on-screen computer game as an animated character.

Host (*off-screen*)

From calculating the trajectory of an object flying through the sky, to making characters jump and come back down to the ground; maths is how games work.

Host

I use maths every day with optimisation strategies, which help enhance the performance of our games. Optimisation means looking for the most efficient way of completing a task.

In this challenge, you and your family will be looking at the mathematical idea of optimisation.

SCENE 2

Graphic Text Display

Maths Concepts.

Host

This challenge is based on the travelling salesman problem, a mathematics and computer science problem, which asks: What is the quickest route a travelling salesman can make, when they have to stop at a number of towns on any given day?

In the Traveller Challenge, you and your family need to find the shortest route someone could take on their travels, when there are 14 places they need to visit on the way.

(Host transitions across screen in video effect)

Without being able to teleport of course!

SCENE 3

Graphic Text Display

The Challenge.

Host

As part of this challenge, you will need a copy of this handout (*holds up copy*), which you can download from the web page or copy it out for yourself if you don't have a printer.

Graphic Animation

An animated character travels through a grid and numbers appear between each dot, counting the moves taken.

Host (*off-screen*)

Starting from point 'A', find the shortest route you can that passes through every red dot and returns to point 'A' again. You can only travel vertically and horizontally between the dots. You are allowed to travel between the same two dots more than once. Count the total length of your journey by counting the number of times you joined a pair of dots, remembering to include extra length if you travelled through the same dots more than once.

Host

Try more combinations; see if you can get your total distance as low as possible.

Remember, there are 14 (red) dots you need to travel between, so even if you take the most direct route between those dots, there are still over 3 billion possible answers!

Well that's it from me. Don't forget to share your video, photo or story on the website, about how you found your paths for the traveller.

Graphic Text Display

The Education State.

Victoria State Government.

Music Stops